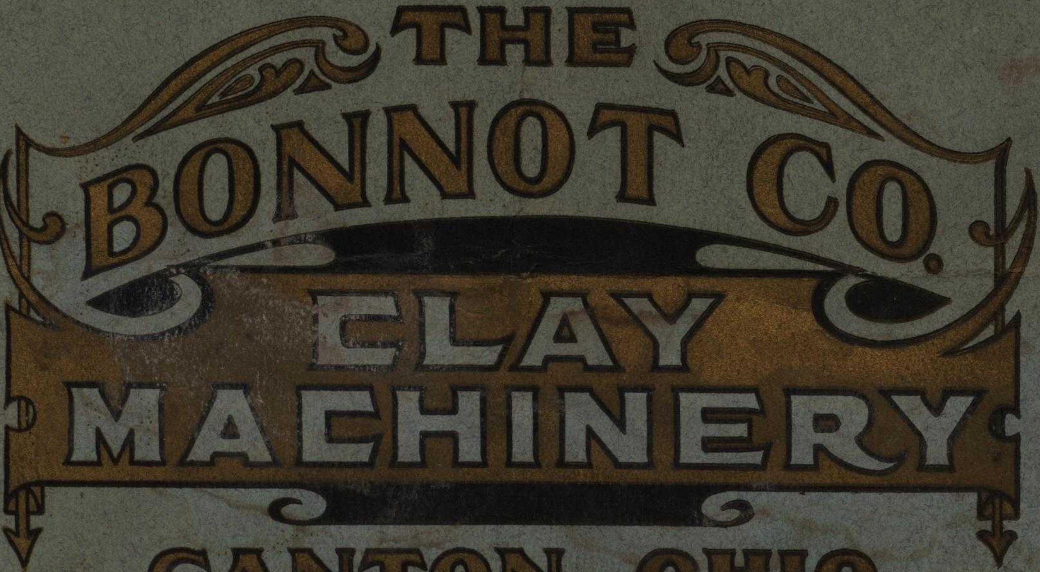

THE BONNOT CO.

CLAY MACHINERY

CANTON, OHIO.
U. S. A.

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MODERN BRICK MACHINERY

FOR ECONOMICAL PRODUCTION AND SATISFACTORY SERVICE

COMPLETE CLAY WORKING EQUIPMENTS

¶ THIS BOOKLET SHOWS ONLY A PART OF OUR LINE OF MACHINERY. COMPLETE CATALOG WILL BE SENT ON REQUEST

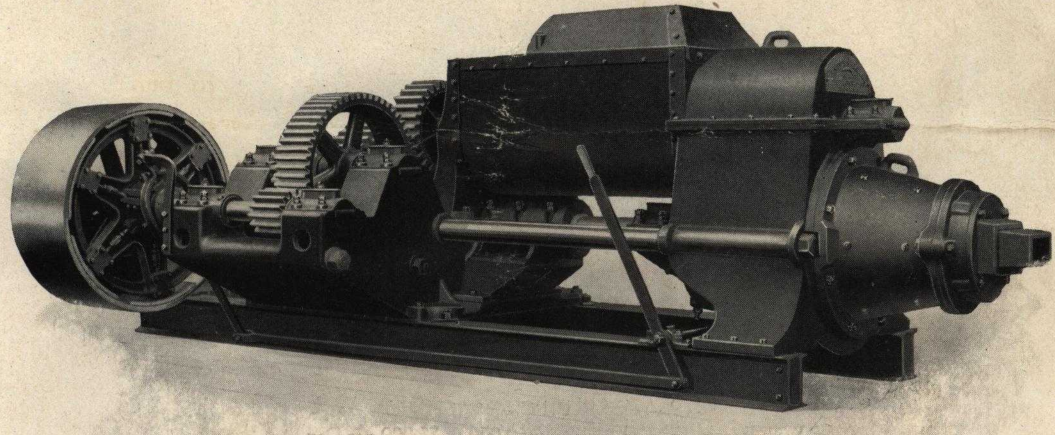
THE BONNOT COMPANY
CANTON : : OHIO

CIRCULAR
No. 14

General Description

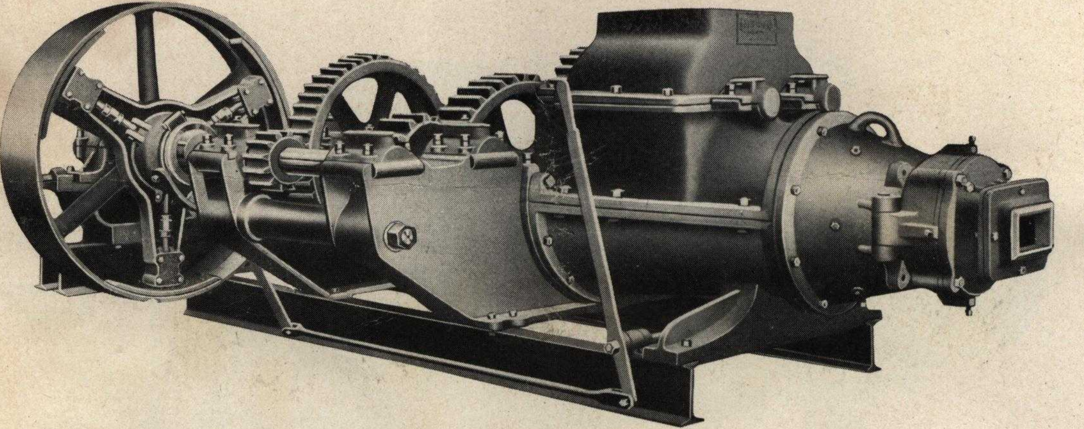
Clayworking machinery is subjected to such hard service that it should be constructed as strong and durable as possible, and it should also be easily get-at-able for making necessary repairs. We claim for "Bonnot" machinery that it most nearly fulfills these requirements. The use of large shafts, long bearings and wide face gears, supplies the strength and durability and in designing, special care has been given to making our machinery accessible. In our brick machines *All Gearing* is of steel and in the Canton Special machine, only steel cut gearing is used. The auger machines can be furnished with or without force feed and in capacity from 20,000 to 75,000 per day. In combined machines capacity ranges from 20,000 to 125,000 per day, and any length of pug mill up to 12 feet. The automatic cutting table we can supply in either rotary or side cut style, also various cutters for hand power. The Canton repress is the best of its class.

Dry pans, pug mills, screens and everything for your plant are all of the same high-grade design, workmanship and material.



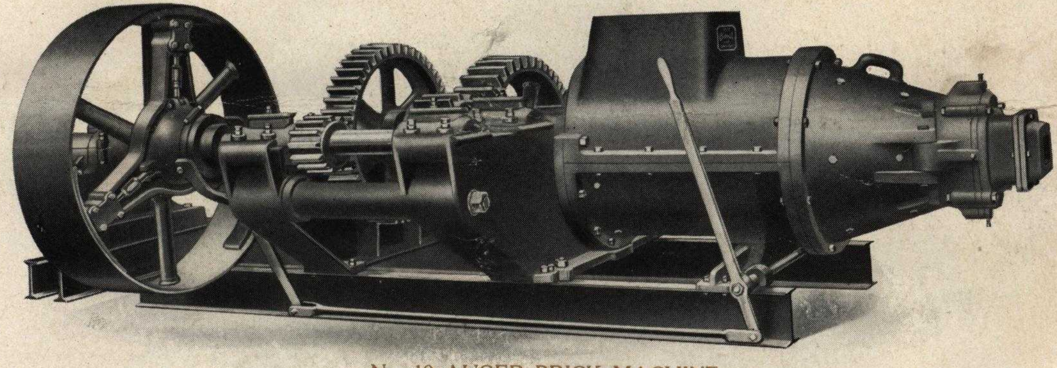
"CANTON SPECIAL" BRICK MACHINE

Steel Cut Gearing Throughout Largest and Heaviest Brick Machine Made Main Thrust Bearing Rebabbited Without Dismantling Capacity up to 150,000 Brick per Day

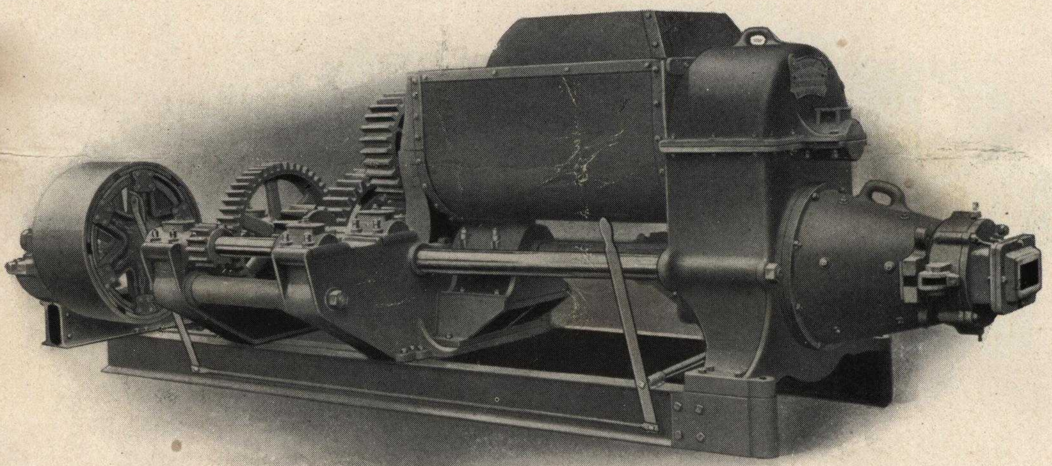


No. 9 AUGER BRICK MACHINE

With Forced Feed Capacity 50,000 to 75,000 per Day

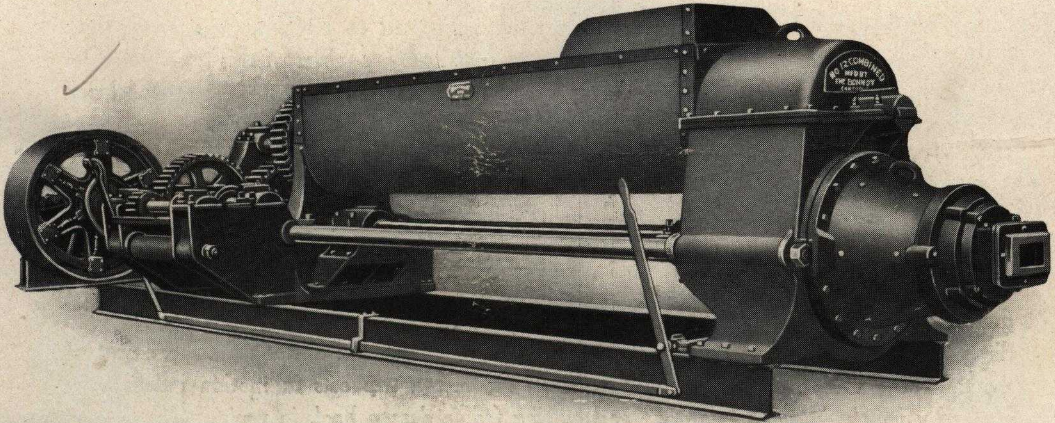


No. 10 AUGER BRICK MACHINE
Capacity 50,000 to 75,000 per Day



No. 6 COMBINED BRICK MACHINE AND PUG MILL

Steel Gears Throughout Self-Contained on Steel I Beams Length of Pug Mill Five to Thirteen Feet
Interlocking Hubs and Independent Knives Capacity 50,000 to 75,000 Brick in Ten Hours



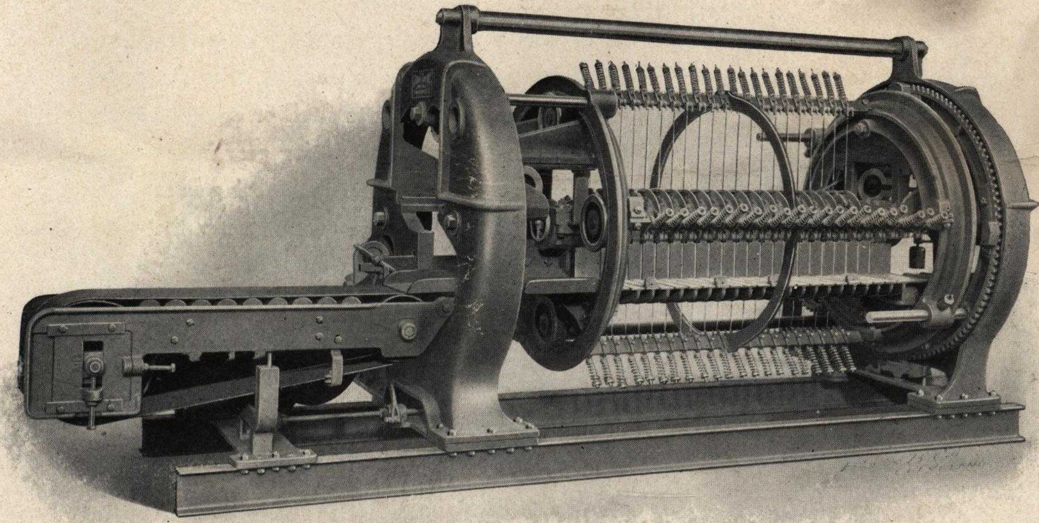
No. 12 COMBINED BRICK MACHINE AND PUG MILL

All Gears and Pinions of Cast Steel Self-Contained on Steel I Beams Interlocking Hubs in Pug Mill
Main Shaft Rebabbited Without Dismantling Capacity 100,000 to 125,000 Brick in Ten Hours

Rotary Automatic Cutting Table

The Canton Rotary Automatic Cutter was designed to make a high grade face brick. It possesses some advantages in construction over other tables of this type. Special attention is called to the fact that the cutting frame is placed next to the die of brick machine, thus doing away with any long column of clay, which is a frequent source of trouble. The entire machine is mounted on steel I beams. The end frames, which are stationary, are securely bolted to the beams and held at top with stretcher. The cutting reel moves in this stationary frame, being carried on tracks and rollers at either end. The driving gears are enclosed in the end frames and impart the motion to cutting reel by means of four shafts placed two at each end. The cutting frame, being thus supported, does away with any track or parts underneath which are likely to become clogged with dirt. There are four sets of cutting wires and twenty brick are cut at each movement of the table. At each revolution of the measuring belt a trip sets in motion independent power by which the cutting is done and cutting frame drawn back in position for making the next cut. Our special wire fasteners make the replacing of wires quite easy while table is in motion.

Floor space required, exclusive of delivery belt, 15 ft. by 6 ft. Capacity, up to 100,000 brick in ten hours.

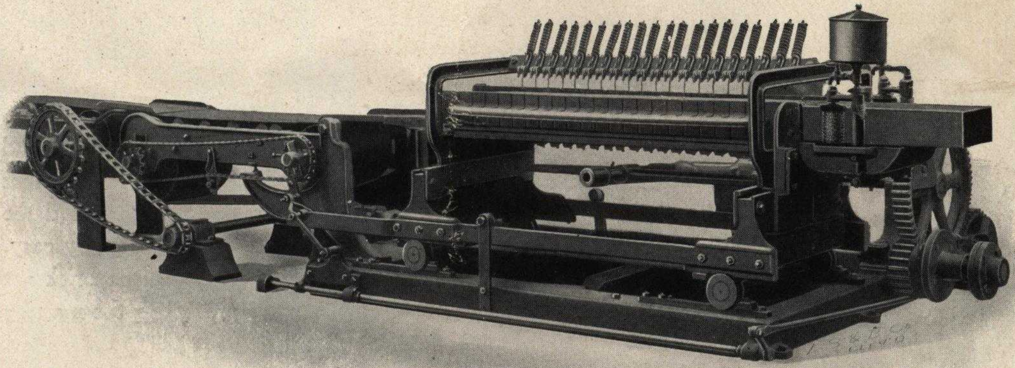


ROTARY AUTOMATIC CUTTING TABLE

Automatic Side Cut Table

The automatic cutter on opposite page is very simple, durable and satisfactory to operate. The cutting frame is placed close to the die of brick machine, thus doing away with the long column of clay which frequently has a tendency to swell or upset. At each revolution of the measuring belt the trip is raised which sets the cutting gear in motion and allows the table to move with the column of clay. The cutting and moving back of cutting frame is done entirely by independent power and the only work done by the column of clay is to operate the trip, which sets the power in motion. Table is arranged to cut eighteen standard brick at each movement, thus giving a comparatively slow motion. Oil rolls are provided for lubricating the column of clay as it passes on the table. Cutting wires are short and easily replaced while the table is in motion. The thrust bars and stroke are adjustable to permit of cutting brick from 7 inches to 10½ inches long. The table is substantially made throughout with large bearings carefully fitted and arranged for taking up wear.

Space required, exclusive of delivery belt, 13½ by 6½ feet. Capacity of table, any number up to 100,000 brick in ten hours.



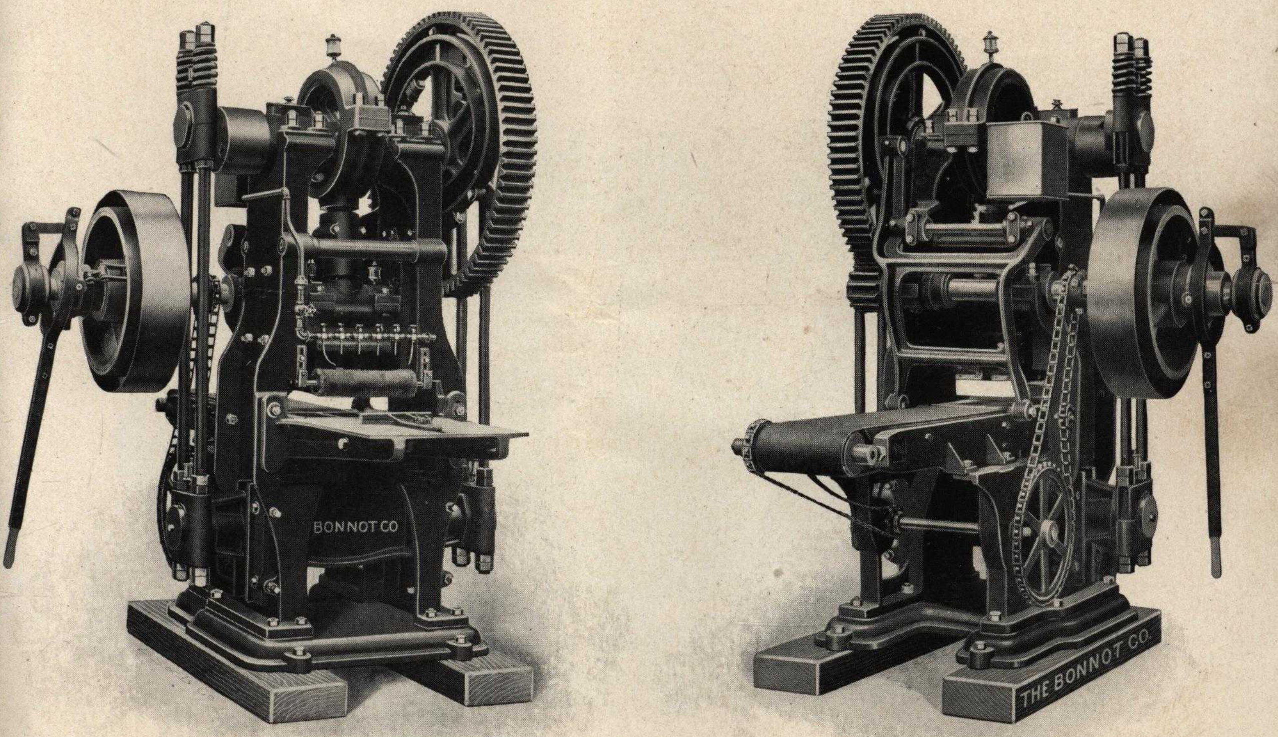
AUTOMATIC SIDE CUT TABLE

Canton Double Die Repress

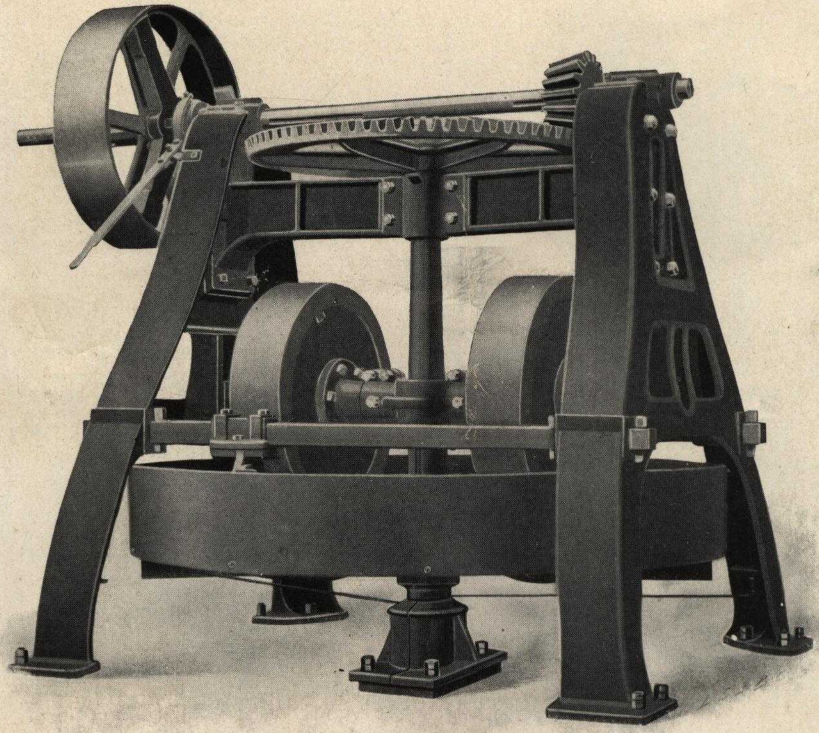
The Canton repress is neat and compact in design and so arranged as to make the wearing parts accessible. All the strain or pressure is taken on the heavy steel side rods, relieved by tempered springs. The pressure is easily and conveniently regulated by right and left nut immediately above the upper crosshead. The motion is continuous, which feature permits of exceptional speed and capacity and makes the repress free from the jar and jolt so destructive to machinery. The shafts are all very heavy, bearings wide and ample and all the wearing parts are above the die. The guides for the crossheads are V shaped and arranged to take up wear. The feeding table is wide and long and the movement of the pusher is so regulated as to make the work of feeding the brick very easy. After the brick have been pressed and the plunger raised to its proper place the brick are laid upon the offbearing table instead of being shoved upon it, thus preventing the marring of the under surface.

Machine is driven with friction clutch pulley, 28 inch diameter, 6 inch face; speed, 130 revolutions per minute for 2,400 brick per hour.

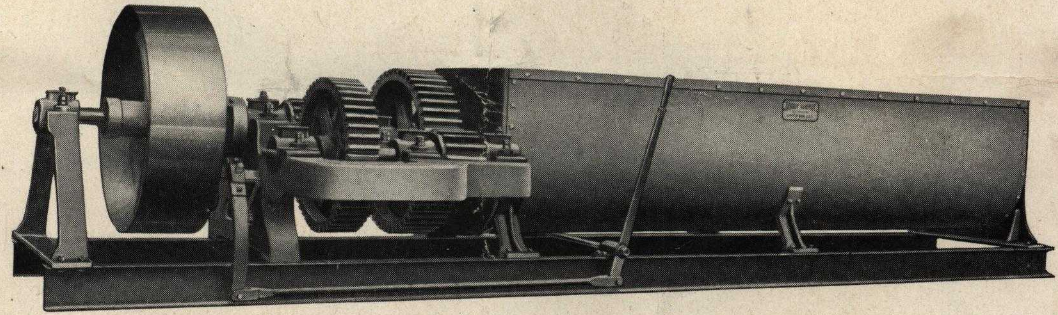
Capacity of repress 20,000 to 30,000 per day. Length with regular 4-foot offbearing belt, 7 feet 3 inches. Width over all, 5 feet 3 inches.



CANTON REPRESS

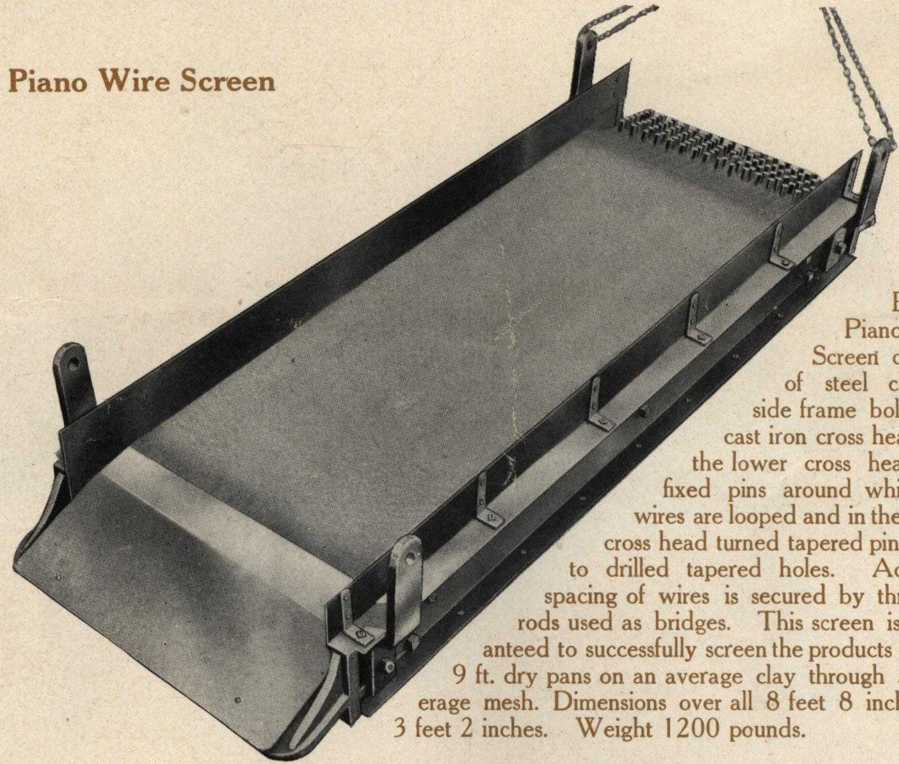


DRY PAN



"C" DOUBLE GEARED PUG MILL

Piano Wire Screen



The Bonnot Piano Wire Screen consists of steel channel side frame bolted to cast iron cross heads. In the lower cross head are fixed pins around which the wires are looped and in the upper cross head turned tapered pins fit into drilled tapered holes. Accurate spacing of wires is secured by threaded rods used as bridges. This screen is guaranteed to successfully screen the products of two 9 ft. dry pans on an average clay through an average mesh. Dimensions over all 8 feet 8 inches by 3 feet 2 inches. Weight 1200 pounds.

HORSE POWER OF BELTING BASED ON 100 R. P M. OF PULLEY

Diam. of Pulley	WIDTH OF BELT IN INCHES																			
	2	2½	3	3½	4	5	6	8	10	12	14	16	18	20	22	24	26	28	30	32
6	.44	.54	.65	.76	.87	1.09	1.31	......	......	......	......	......	......	......	......	......	......	......	......	......
7	.51	.64	.76	.89	1.01	1.27	1.53	......	......	......	......	......	......	......	......	......	......	......	......	......
8	.58	.73	.87	1.02	1.16	1.45	1.75	......	......	......	......	......	......	......	......	......	......	......	......	......
9	.65	.82	.98	1.15	1.31	1.64	1.97	......	......	......	......	......	......	......	......	......	......	......	......	......
10	.73	.91	1.09	1.27	1.45	1.81	2.18	......	......	......	......	......	......	......	......	......	......	......	......	......
12	.87	1.09	1.31	1.53	1.75	2.18	2.62	......	......	......	......	......	......	......	......	......	......	......	......	......
14	1.02	1.27	1.52	1.77	2.02	2.53	3.05	......	......	......	......	......	......	......	......	......	......	......	......	......
16	1.16	1.45	1.74	2.03	2.32	2.91	3.48	......	......	......	......	......	......	......	......	......	......	......	......	......
18	1.31	1.64	1.96	2.29	2.62	3.27	3.92	......	......	......	......	......	......	......	......	......	......	......	......	......
20	1.45	1.82	2.18	2.55	2.91	3.64	4.36	......	......	......	......	......	......	......	......	......	......	......	......	......
24	......	......	......	......	3.5	4.4	5.2	7.	8.7	10.5	12.2	14.	16	17	19	21	23	24	26	28
30	......	......	......	......	4.4	5.4	6.6	8.7	10.9	13.1	15.3	17.4	19	22	24	26	28	31	33	35
36	......	......	......	......	5.2	6.5	7.8	10.5	13.1	15.7	18.3	20.9	24	26	29	31	34	37	39	42
42	......	......	......	......	6.1	7.6	9.2	12.2	15.3	18.2	21.4	24.3	28	31	34	36	40	43	46	49
48	......	......	......	......	7.	8.8	10.4	14.	17.4	21.	24.4	28.	31	35	38	42	45	49	52	56
54	......	......	......	......	7.8	9.8	11.8	15.6	19.6	23.6	26.4	31.2	35	39	43	47	50	53	58	62
60	......	......	......	......	8.8	10.8	13.1	17.4	21.8	26.2	30.6	34.8	39	44	48	52	57	61	65	70
66	......	......	......	......	9.6	12.	14.4	19.2	24.	28.8	33.6	38.4	43	48	53	58	62	67	72	77
72	......	......	......	......	10.4	13.	15.6	21.	26.2	31.4	36.6	41.8	47	52	58	63	68	73	78	84
84	......	......	......	......	12.2	15.2	19.4	24.4	30.6	36.4	42.8	48.6	55	61	67	73	79	86	91	97
96	......	......	......	......	......	......	......	......	......	......	......	......	63	70	76	84	90	98	104	112
120	......	......	......	......	......	......	......	......	......	......	......	......	78	88	96	104	114	122	130	140
144	......	......	......	......	......	......	......	......	......	......	......	......	94	104	116	126	136	146	156	168

This Table is Based on Single Belt. Power of Double Belt is to Single Belt as 10 to 7

HORSE POWER OF STEEL SHAFTING

Size of Shaft in inches	REVOLUTIONS PER MINUTE									
	100	125	150	175	200	225	250	300	350	400
1 3/16	2.4	3.1	3.7	4.3	4.9	5.5	6.1	7.3	8.5	9.7
1 7/16	4.3	5.3	6.4	7.4	8.5	9.5	10.5	12.7	14.8	16.9
1 11/16	6.7	8.4	10.1	11.7	13.4	15.1	16.7	20.1	23.4	26.8
1 15/16	10.	12.5	15.	17.5	20.	22.5	25.	30.	35.	40.
2 3/16	14.3	17.8	21.4	24.9	28.5	32.1	35.6	42.7	49.8	57.
2 7/16	19.5	24.4	29.3	34.1	39.	44.	48.7	58.5	68.2	78.
2 11/16	26.	32.5	39.	43.5	52.	58.5	65.	78.	87.	104.
2 15/16	33.8	42.2	50.6	59.1	67.5	75.9	84.4	101.3	118.2	135.
3 3/16	43.	53.6	64.4	75.1	85.8	96.6	107.3	128.7	150.3	171.6
3 7/16	53.6	67.	79.4	93.8	107.2	120.	134.	158.8	187.6	214.4
3 15/16	80.	100.	120.	140.	160.	180.	200.	240.	280.	320.
4 7/16	113.9	142.4	170.8	199.4	227.8	256.2	284.7	341.7	398.6	455.5
4 15/16	156.3	195.3	234.4	273.4	312.5	351.5	390.6	468.7	546.8	625.
5½	207.9	260.	311.9	364.	416.	460.	520.	624.	728.	830.

Useful Information

To ascertain the safe working pressure on a boiler, multiply twice the thickness of the shell by the tensile strength, and divide the product by the diameter of the shell in inches.

Each nominal horse-power of boiler requires 1½ cubic feet of water per hour.

A cubic foot of water contains 7½ gallons, or 1,728 cubic inches, and weighs 62½ pounds.

A gallon of water contains 231 inches and weighs 8 1-3 pounds (U. S. Standard)

The friction of water in pipes is as the square of the velocity.

The capacity of pipes is as the square of their diameter; thus, doubling the diameter of a pipe increases its capacity four times.

The height of a column of fresh water, equal to a pressure of one pound per square inch, is 2.31 feet. (In usual computation this is taken at two feet, thus allowing for ordinary friction.)

A properly designed boiler, with skillful firing, will evaporate from seven to ten pounds of water per pound first-class coal.

One cubic foot of anthracite coal weighs about 58 pounds, and one cubic foot of bituminous coal from 47 to 50 pounds. A ton loose, occupies from 43 to 48 cubic feet.

The average consumption of coal for steam boilers is 12 lbs. per hour for each square foot of grate.

Water expands one-ninth of its bulk in freezing.

One horse power is equivalent to raising 33,000 lbs. one foot per minute.

One cubic inch of cast iron weighs .26 lbs., or about 4 oz. A cubic foot of cast iron weighs 450 lbs.

Oxalic acid dissolved in soft water ½ oz. to a pint is one of the best means for cleaning and brightening brass work.

Iron or steel immersed warm in a solution of carbonate of soda (washing soda) for a few minutes will not rust.

Rust joint (quick setting) sal-ammoniac powdered 1 lb., flower of sulphur 2 lbs., iron borings 80 lbs., mix to a paste with water. (Slow setting), sal-ammoniac 2 lbs., sulphur 1 lb., iron borings 200 lbs. The latter is the best if the joint is not needed at once.

Weight of a superficial foot of plate iron, from 1-16th inch to 1 inch thick:

INCH	LBS.	INCH	LBS.
1-16	2.5	⅝	25
⅛	5	¾	30
¼	10	⅞	35
⅜	15	1	40
½	20		

THE